

112

AN  
APPENDIX  
TO THE  
FOURTH EDITION  
OF THE  
ANATOMY  
OF THE  
HUMAN BODY.

Printed separately for the Use of those who  
have the former EDITIONS.

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BY  
W. CHESELDEN,  
SURGEON to Her MAJESTY,  
F. R. S.  
and SURGEON to St. Thomas's-Hospital.

LONDON,

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To which are added, some Observations relative to an erroneous  
Statement made by Dr JAMES DOUGLASS, as to the nature of  
CHESELDEN'S improved Lateral Operation of Lithotomy.

(*From the Edin. Med. and Surg. Journal, No. 139.*)

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THE Editors of the Edinburgh Medical and Surgical Journal have thought it desirable to throw off a few copies of this valuable and scarce Tract, for the purpose of affording an opportunity of its being possessed by some of the principal public Libraries of the country, as an accompaniment to Cheselden's Anatomy, and an illustration of some important particulars relative to his improved lateral Operation of Lithotomy, which had been very much misunderstood.

*January 1, 1839.*



## A N A P P E N D I X, &c.

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WE had occasion, lately, to direct the attention of our readers to the singular misapprehension relative to the particular nature of Cheselden's improved lateral operation of lithotomy, which was pointed out by Dr Yelloly, some years since, in a letter to Sir Astley Cooper, that was published in the fifteenth volume of the *Medico-Chirurgical Transactions*.

The means of completely clearing up the point in question, after the misconception of a century, arose, in a material degree, from Dr Yelloly being so fortunate as to obtain access to an Appendix to the fourth edition of Cheselden's *Anatomy*, which, in the course of his inquiries, he found to be referred to. We have therefore thought it might be desirable to give a reprint in our *Journal* of this interesting tract, which is exceedingly scarce; and are happy in being able to do so, by the good offices of Dr Yelloly, in obtaining for us, through the kindness of Dr Clutterbuck, from the library of the Medical Society of London, the use of the copy which he employed in his letter to Sir Astley Cooper. Though some parts of this Appendix have been introduced into subsequent editions of Cheselden's *Anatomy*, yet, as the tract is very short, we have thought it would be most acceptable to the public for us to give it entire.

We append some observations for the purpose of making the important bearings of Cheselden's Appendix the more obvious.

### CHAP. I.—*A Short Historical Account of Cutting for the Stone.*

The most ancient way of cutting for the stone, is that described by Celsus, now called cutting by the gripe, or the lesser apparatus; and as Celsus relates, was not performed in his time but upon boys between nine and fourteen years of age. But Rosset, in his treatise *de partu Cæsareo* says, he thinks this must be a mistake in the manuscript from which Celsus was printed, seeing younger boys are well known to be much fitter subjects for that operation. But this way of operating is very difficult in men, and perhaps attended with inconveniences if it has ever been practised, that the operators have not thought fit to publish.

In the year 1524 Marianus published the method of cutting by the greater apparatus, (now commonly called the old way) which was invented by his master Johannes de Romanis; this operation has one advantage over the former, that it may be done conveniently upon men full grown.

In the year 1697 Frere Jacques came to Paris (as Mery and others have related) to practise his new invented way of cutting for the stone, which he declared to be directly into the bladder, and which he had performed with so great reputation, that the king ordered him to cut in both the hospitals, where though some of his patients recovered surprisingly, yet the major part miscarrying, his operation fell presently into disgrace. Upon opening these unhappy patients (as Mery and others relate) in some the bladders were found cut through, and wounded in many places; in some the neck of the bladder totally divided; and in others the intestinum rectum miserably cut, which upon the whole sufficiently shewed, that the ill success of this operation was not owing to the nature of it, but the operators' ignorance in anatomy, as they themselves insinuate.

In the year 1717-8 Dr James Douglass, in a paper presented to the Royal Society, demonstrated, from the anatomy of the parts, that the high operation for the stone might be practised; (which had been once performed by Franco injudiciously, and by him disrecommended, though his patient recovered; and afterwards strongly recommended, but not practised by Rosset) yet no one undertook it, till his brother, Mr John Douglass, about three years afterwards performed it, and with great applause, his two first patients recovered. Soon after a surgeon of St Thomas's Hospital cut two, who both recovered; but the same gentleman afterwards cutting two, who miscarried by the cutting or bursting the peritoneum, so that the guts appeared, this way immediately became as much decryed, as it was before commended; and the surgeons of St Bartholomew's Hospital who had resolved to do this operation, altered their resolution, and went on in the old way. The next season it being my turn in St Thomas's, I resumed the high way, and cutting nine with success, it came again in vogue; after that every lithotomist of both hospitals performed it; but the peritoneum being often cut or burst, (twice in my practice,) though some of these recovered, and sometimes the bladder itself was burst from injecting too much water, which generally proved fatal in a day or two. Another inconvenience attended every operation of this kind, which was, that the urine's lying continually in the wound sometimes made sloughs, and always retarded the cure, but then it was never followed with an incontinence of urine.

What the success of the several operators was, I will not take the liberty to publish; but for my own, exclusive of the two before mentioned, I lost no more than one in seven, which is more than any one else that I know of could say; whereas in the old way, even at Paris, from a fair calculation of above 800 patients, it appears that more than two in seven died. And though this operation came into universal discredit, I must declare it is my opinion, that it is much better than the old way, to which they all returned, except myself, who would not have left the high way but for the hopes I had of a better, being well assured that it might hereafter be practised with greater success; these fatal accidents having pretty well shewn how much water might be injected, and how large the wound might safely be made.

But hearing of the great success of Mr Rau, professor of Anatomy at Leyden, I determined to try, though not in his manner, to cut directly into the bladder; and as his operation was an improvement of Fryar James, I endeavoured to improve upon him by filling the bladder, as in the high way, with water, leaving the catheter in, and then cutting on the outside of the catheter into the bladder, in the same place as upon the gripe, which I could do very readily, and then I took out a stone of any size with more ease than in any other way. I forbear to give a more particular account of the manner of performing this operation, it having been done already as well as is possible by Dr Douglas. My patients for some days after the operation seemed out of danger, but the urine which came out of the bladder continually lodging upon the cellular membrane on the outside of the rectum, made foetid ulcers, attended with a vast discharge of stinking matter, and from this cause I lost four patients out of ten. The case of one which escaped was very remarkable; a few days after he was cut, he was seized with a great pain in his back and legs, with very little power to move them; upon which he turned upon his face, and rested almost constantly upon his knees and elbows above a fortnight together, having no ease in any other posture all that while, at length his urine coming all the right way, his wound soon healed, and he recovered the use of his back and limbs. I think all these severe symptoms could proceed from no other cause than the urine and matter somehow offending the great nerves which come out of the os sacrum to go to the lower limbs. I then tried to cut into the bladder, in the same manner that Mr Rau was commonly reported to do, but there had the same inconvenience from the urine's lodging upon the cellular membrane on the outside of the intestinum rectum. Upon these disappointments I contrived the manner of cutting, which is now called the lateral way.



This operation I do in the following manner. I tie the patient, as for the greater apparatus, but lay him upon a blanket several doubles upon an horizontal table three foot high, or a little more, with his head only raised. I first make as long an incision as I well can, beginning near the place where the old operation ends, and cutting down between the musculus accelerator urinæ, and erector penis, and by the side of the intestinum rectum. I then feel for the staff, and cut upon it the length of the prostate gland strait on to the bladder, holding down the gut all the while with one or two fingers of my left hand. The rest of this operation is the same as in the old way. But in this way there being often cut small vessels, I always tie them with a ligature, passed under them by the help of a crooked needle.

The first twenty-seven patients cut this way recovered, and I believe are all living at this time. Indeed I had cut thirty-one who recovered before I had one died, having cut four more who recovered between the time the twenty-eighth was cut, and the time he died; but I scorn to use any fallacious way of representing my success. Some of these being cut in the hospital, and some privately, the truth of this account may be suspected by those who do not know me. I cannot take the liberty to mention the names of private patients, therefore I will give a detail of those only which I cut this way in the hospital, where the first twenty-five recovered, to the truth of every one of which I had above twenty witnesses, and I do believe these patients are all living at this time.

#### MARCH 27, 1727.

Robert Kason	aged 4
Henry Webb	5
Francis Willsmore	15

#### APRIL 12, 1727.

Hannibal Basketfield	3
Thomas Hull	4
Alexander Montgomery	8
Henry Cope	44

#### MAY 15, 1727.

Thomas Nailer	7
John Letheridge	8
Daniel Bezely	9

#### APRIL 8, 1728.

Walter Bromingham	4
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William Jersey	age 4
Thomas Kennet	13

## APRIL

William Davis	4
Thomas Ellis	5
William Adams	6
James Bond	10

## MAY 9, 1728.

John Parson	5
William Chater	11
Wilfrey Peale	40
William Haffenden	67

## MAY 25, 1728.

Joseph Godwin	3
Ellis Bakewell	5

MARCH 21, 172<sup>8</sup>/<sub>9</sub>.

William Ward	10	
John Edwards	15	
Thomas Warren	17	died.
Isaac Wood	25	

## APRIL 21, 1729.

John Payne	4
Thomas March	6
Robert Caruthus	10

## APRIL 29, 1729.

Gabriel Forster	21
Simon Sutcliffe	36
John Miles	42

## MAY 1729.

Four cut in the presence of Mons. Morand, one of which, named Money, died. The names of the other three I have lost.

## JULY 1, 1730.

Henry Hall	4
Walter Scott	4
John Tooting	7
John Paxter	11
Edward Eilding	13

JULY 31, 1730.

Joseph Wright	aged 6
Joshua Philips	7
Richard Michell	10
Daniel Hall	14
In all 46.	

Thomas Warren, the first who died, had been troubled with the stone from his cradle, to the time he was cut, seventeen years old; he was very much wasted with pain, and had bad kidneys; he lived free from pain three weeks after he was cut, but his wound never digested well.

The other who died, named Money, had a violent whooping cough. He was removed from the hospital for the benefit of the air, and died a fortnight after the operation. Many of the children had the small-pox during their cure, and some the measles.

CHAP. II.—*An account of some Observations made by a young gentleman who was born blind, or lost his sight so early, that he had no remembrance of ever having seen, and was couch'd between thirteen and fourteen years of age.*

Though we say of this gentleman that he was blind, as we do of all people who have ripe cataracts, yet they are never so blind from that cause but that they can discern day from night; and for the most part in a strong light, distinguish black, white, and scarlet; but they cannot perceive the shape of any thing; for the light by which these perceptions are made, being let in obliquely through the aqueous humour, or the anterior surface of the chrystalline (by which the rays cannot be brought into a focus upon the retina) they can discern in no other manner, than a sound eye can through a glass of broken jelly, where a great variety of surfaces so differently refract the light, that the several distinct pencils of rays cannot be collected by the eye into their proper foci; wherefore the shape of an object in such a case cannot be at all discerned, though the colour may. And thus it was with this young gentleman, who though he knew these colours asunder in a good light, yet when he saw them after he was couch'd, the faint ideas he had of them before, were not sufficient for him to know them by afterwards, and therefore he did not think them the same which he had before known by those names. Now scarlet he thought the most beautiful of all colours, and of others the most gay were the most pleasing, whereas the first time he saw black it gave him great uneasiness, yet after a little time he was reconciled to it: but some months

after, seeing by accident a negro woman, he was struck with great horror at the sight.

When he first saw, he was so far from making any judgement about distances, that he thought all objects whatever touched his eyes, (as he expressed it) as what he felt did his skin, and thought no objects so agreeable as those which were smooth and regular, though he could form no judgement of their shape, or guess what it was in any object that was pleasing to him. He knew not the shape of any thing, nor any one thing from another, however different in shape or magnitude; but upon being told what things were, whose form he before knew from feeling, he would carefully observe, that he might know them again; but having too many objects to learn at once, he forgot many of them; and (as he) said at first he learned to know, and again forgot a thousand things in a day. One particular only (though it may appear trifling) I will relate. Having often forgot which was the cat, and which the dog, he was ashamed to ask; but catching the cat (which he knew by feeling) he was observed to look at her steadfastly, and then setting her down, said, so puss! I shall know you another time. He was very much surprized, that those things which he had liked best, did not appear most agreeable to his eyes, expecting those persons would appear most beautiful that he loved most, and such things to be most agreeable to his sight, that were so to his taste. We thought he soon knew what pictures represented, which were shewed to him, but we found afterwards we were mistaken; for about two months after he was couched he discovered at once they represented solid bodies, when to that time he considered them only as party-coloured planes, or surfaces diversified with variety of paint; but even then he was no less surprized, expecting the pictures would feel like the things they represented, and was amazed when he found those parts, which by their light and shadow appeared now round and uneven, felt only flat like the rest, and asked which was the lying sense, feeling, or seeing?

Being shewn his father's picture in a locket at his mother's watch, and told what it was, he acknowledged a likeness, but was vastly surprized; asking, how it could be, that a large face could be expressed in so little room, saying, it should have seemed as impossible to him, as to put a bushel of any thing into a pint.

At first, he could bear but very little sight, and the things he saw, he thought extremely large; but upon seeing things larger, those first seen he conceived less, never being able to imagine any lines beyond the bounds he saw; the room he was in he said, he knew to be but part of the house, yet he could not conceive that the whole house could look bigger. Before he

was couched, he expected little advantage from seeing, worth undergoing an operation for, except reading and writing; for he said, he thought he could have no more pleasure in walking abroad than he had in the garden, which he could do safely and readily. And even blindness he observed, had this advantage, that he could go any where in the dark much better than those who can see; and after he had seen, he did not soon lose this quality, nor desire a light to go about the house in the night. He said, every new object was a new delight; and the pleasure was so great, that he wanted ways to express it; but his gratitude to his operator he could not conceal, never seeing him for some time without tears of joy in his eyes, and other marks of affection: And if he did not happen to come at any time when he was expected, he would be so grieved, that he could not forbear crying at his disappointment. A year after first seeing, being carried upon Epsom Downs, and observing a large prospect, he was exceedingly delighted with it, and called it a new kind of seeing. And now being lately couched of his other eye, he says, that objects at first appeared large to this eye, but not so large as they did at first to the other; and looking upon the same object with both eyes, he thought it looked about twice as large as with the first couched eye only, but not double, that we can any ways discover.

I have couched several others who were born blind, whose observations were of the same kind; but they being younger, none of them gave so full an account as this gentleman.

TABLE I.—Thirty three stones taken from William Haffenden, in the sixty-eight year of his age. The next day after he was cut, the measles appeared, which he had in a very severe manner. He is now living at Gravesend. (Vid. page 350, line 12th.)

TABLE II.—A stone which weighed eleven ounces, and measured ten inches round, taken from John Miles, who is now living at Reading. (Vid. p. 350, l. 27.)

TABLE III.—Three figures of eyes to explain an operation, which I invented some years ago, and printed a short account of in the *Philos. Trans.* and have often practised with success. The distemper for which this operation is performed, is either a total closure of the pupil, which is sometimes natural, and sometimes happens from inflammation; or else when the pupil is extremely contracted, and the inner edges of the iris growing to a cataract, or part of a cataract after couching. The manner of doing this operation is thus: the eyelid being firmly held open by an instrument, a small knife or needle, edged on one side, is thrust through the tunica sclerotis, as in the lower figure; and then forwards through the iris, the edge being turned



to the iris; in drawing of it out, a slit is cut as in the two upper figures. When this distemper is without a cataract, it is best to make the operation in the middle, as in the upper one; but if there is a cataract, or part of a cataract, then to make it higher, that the cataract may not obstruct the light. These cataracts are generally very small, and sometimes by reason of their adhesion not to be removed. The aperture in the middle eye, was made lower than the centre of the cornea, there being an albugo on the upper part of it, which made it unfit to perform the operation in that part.

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From the information communicated in Cheselden's preceding account of the operation of lithotomy, which was introduced into the subsequent editions of his *Anatomy*, it appears, that after the high operation for the stone was discontinued, Cheselden made several attempts to improve the lateral operation, of which an account is given in a work published by Dr James Douglass, a distinguished anatomist of that period, in the year 1726.\*

The statements contained in this work appear to have been correct; for in relation to one of the attempts at improvement, Cheselden observes, that an account of it has been given, "as well as is possible, by Dr Douglass."

Thus far, therefore, Dr Douglass may be regarded as a competent authority on the subject; but in the year 1731, he published an Appendix to his *History of the Lateral Operation*, which is totally irreconcilable with the accounts published relative to it by Cheselden himself.†

We shall take from Dr Yelloly's letter to Sir Astley Cooper, some of the principal particulars of evidence connected with his correction of Dr Douglass's singular misapprehensions relative to the nature of Cheselden's improved lateral operation, which led to a very long period of misapprehension on the subject.

The account given by Dr Douglass of Cheselden's operation is as follows. After making the external incision, Cheselden introduces "the fore-finger of the left hand into the wound, and keeps it there till the internal incision is quite finished, first to direct the point of the knife into the groove of the staff, which

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\* *History of the lateral operation, or an account of the method of extracting a stone, by making a wound near the great protuberance of the os ischium, through the common integuments and levator ani into the side of the bladder, without touching the urethra, prostate gland, vesiculæ seminales, or any other of the urinary or seminal vessels; first attempted by Frere Jacques in France, and afterwards successfully performed by Professor Rau in Holland; with a postscript concerning the introduction and improvement of this method tried in London.* 4to. London, 1726.

† Appendix to the *History of the Lateral Operation for the stone*, containing Mr Cheselden's present method of performing it. 4to. London, 1731.

he now feels with the end of his finger, and likewise to hold down the *intestinum rectum*, by the side of which his knife is to pass, and to prevent its being wounded. This inward incision is made with more caution and more leisure than the former.

“ His knife first enters the groove of the rostrated or strait part of his catheter, *through the sides of the bladder, immediately above the prostata*, and afterwards the point of it continuing to run in the same groove in a direction downwards and forwards, or towards himself, he divides that part of the sphincter of the bladder that lies upon that gland, and then he cuts the outside of one-half of it obliquely, according to the direction and whole length of the urethra that runs within it, and finishes his internal incision by dividing the muscular portion of the urethra on the convex part of his staff.” \*

On comparing this account with Cheselden's own words, as given in the preceding Appendix, an entire discrepancy between the modes of operation described by them is perfectly obvious. But the misapprehension into which Dr Douglass appears to have fallen in respect to Cheselden's operation, is the more extraordinary, because not only was Cheselden's Appendix published the year before Dr Douglass wrote his own Appendix, but it was quoted by the latter for the purpose of showing that the mode of operating described by Cheselden had been discontinued. This is apparent from Dr Douglass's further observations; for he goes on to say, “ When he first began to practise this method, Cheselden cut the very same parts *the contrary way*; that is, his knife entered first the muscular part of the urethra, which he divided laterally from the pendulous part of its bulb to the apex, or first point of the prostate gland, and from thence directed his knife upward and backward all the way into the bladder; as we may read in the Appendix he lately published to the fourth edition of his book of anatomy. But some time after he observed, that in that manner of cutting, the bulb of the urethra lay too much in the way; the groove of the staff was not so easily found, and the *intestinum rectum* was in more danger of being wounded.”

Here, therefore, it appears, that Dr Douglass was actually cognizant of the performance of an operation by Cheselden, similar to that described by the latter, which he states having been given up for that of which he himself gives an account. This, however, could not have been the case; for M. Morand, the distinguished Paris surgeon, who was sent over by the

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\* Appendix to the History of the lateral operation for the Stone, containing Mr Cheselden's present method of performing it, p. 22. 4to. London, 1731.



French government to be instructed in Cheselden's operation describes, in a communication which was made to the Royal Academy of Sciences in 1731, but not published till two years afterwards, Cheselden's operation, by translating, as nearly as possible, that account of it which was published by Cheselden the year before, without giving the least intimation of any change having been adopted in the mode of its performance.

But the most conclusive evidence against such an idea is derived from Cheselden himself, who introduced the account of his improved operation, in nearly the words of his Appendix, into the fifth edition of his *Anatomy*, published in the year 1740; and into the edition of 1750, (the sixth,) which is the last that appeared during his lifetime. There is great laxity, it may likewise be observed, as to the mode in which Dr Douglass mentions Cheselden's number of operations, and success. He states, that at the time when he (Dr Douglass) wrote, (namely, in July 1731), Cheselden had "saved 50 patients out of 52, whom he cut successively in St Thomas's Hospital."\* But the fact is, that he lost *three* of the first 50, which is one-half more; † and in the 52 mentioned by Dr Douglass, no fewer than 46 came under the category of Cheselden's very operation, which Dr Douglass so singularly persuaded himself had been relinquished.

But the evidence even goes further; for though Douglass states the number operated upon up to the time that he wrote (July 1831) to be 52, it was, in truth, 66, up to the previous April. This is learned by a communication from M. Morand, of April 3d, in which he states that he had just received from Mr Cheselden a list of 20 patients, on whom he had operated since the publication of the 46 mentioned in the Appendix, and that upon the original plan which Dr Douglass assures us had been long previously repudiated. ‡

Heister seems to have been one of the first authors who took Dr Douglass's representations as demonstrative of what Cheselden's improved operation of lithotomy was; and he has been followed by most of the first surgical writers, both of this and other countries. It is certainly a circumstance not a little remarkable in the history of our profession, that the knowledge of Cheselden's improved operation should have been sought for

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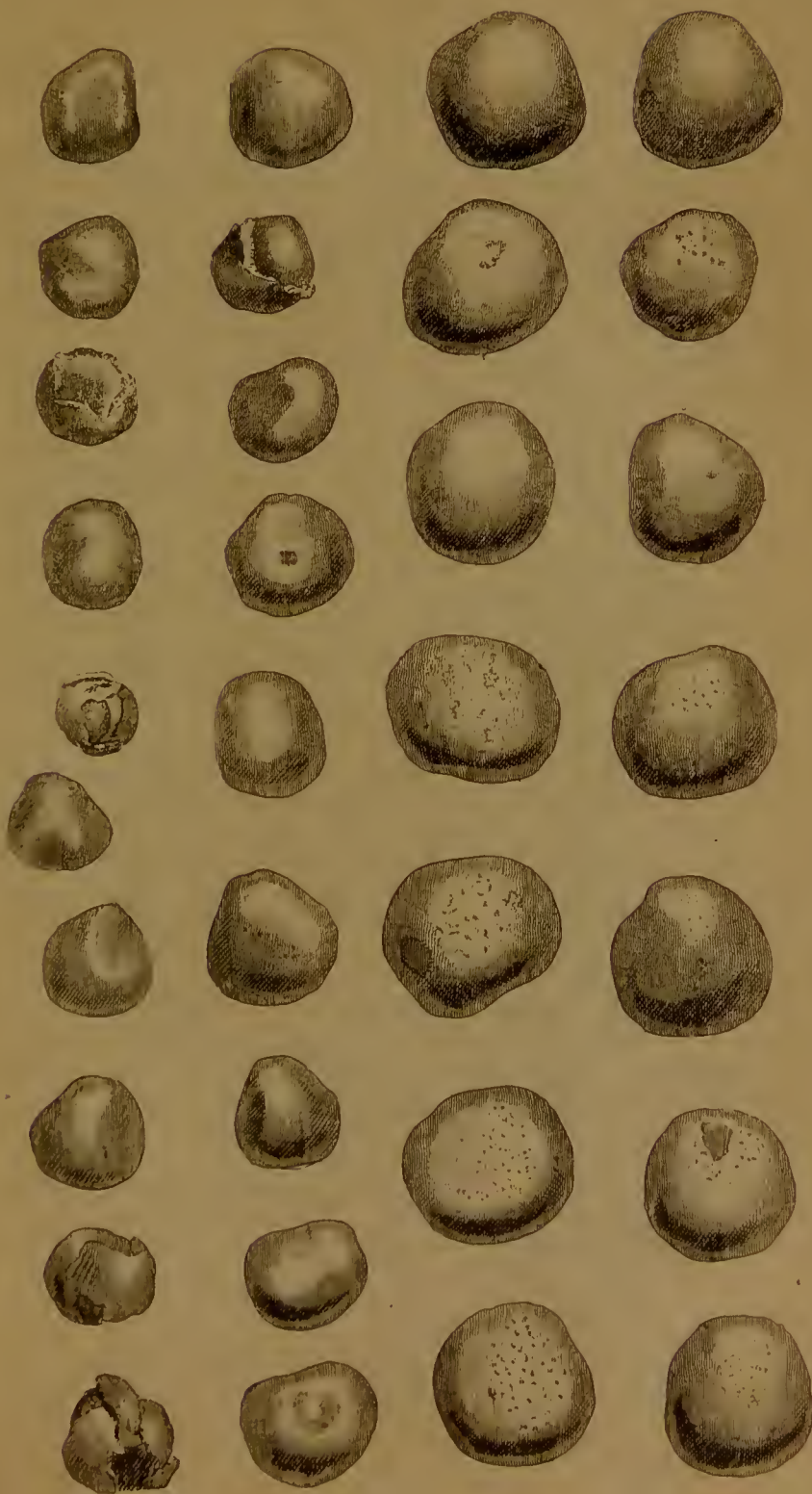
\* Appendix to the History of the lateral operation for the Stone, containing Mr Cheselden's present method of performing it, p. 2. 4to. London, 1731.

† "Of the first 50, only 3 died." *Anatomy*, p. 332.

‡ "Je viens de recevoir la liste des malades de M. Cheselden taillés depuis celle qui est imprimée dans son Appendix, et j'apprends qu'il en a taillés vingt, dont il en est mort deux. Morand's Recherches sur l'Operation de la Taille; Memoires de l'Académie Royale des Sciences pour l'année 1731, p. 144.

rather in Dr Douglass's account of it, than his own; and we think, with Dr Yelloly, that this is very much to be attributed to the "reliance which has been placed on Dr Douglass's judgment and opportunities of observation; to the ready credence usually given to confident assertions of historical facts; and to the disinclination which there is either to ascertain, or to investigate, the evidence on which such facts may depend."

*CHESELDEN'S 21<sup>ST</sup> CASE.*





*VIEW OF STONE IN CHESELDEN'S 33<sup>d</sup> CASE.*

